How they make Cigars in New York.
See page 399.

HEALTH

A WEEKLY JOURNAL OF

DOMESTIC AND SANITARY SCIENCE.

"Reason's whole pleasure—all the joys of sense—
Lie in three words, HEALTH, PEACE, and COMPETENCE."—*Pope.*

EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

VOL. XII.—No. 311. FRIDAY, MARCH 22, 1889. [PRICE TWOPENCE.

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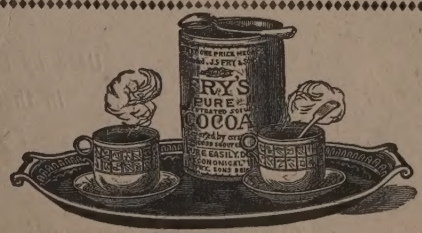

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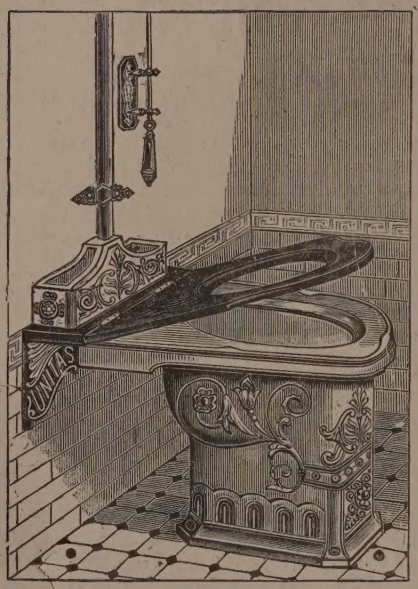

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HEALTH

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, MARCH* 22, 1889.

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Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

DR. HENRY BENNET, of Ventimiglia, Italy, writes as follows in the *British Medical Journal* on the topic of "Consumptive Fellow-Travellers." "The danger of contagion from travelling for weeks or months in a confined cabin at sea, badly or not at all ventilated, is a real danger. It must be acknowledged as such by all, whatever opinions they may hold as to the contagion of phthisis generally. I am myself far from accepting the modern doctrines as to the extreme and general contagion of phthisis, for my personal experience is against it. I am, however, firmly convinced that the danger exists when the healthy are made to live day and night in close contact, in an unventilated room or cabin, with persons suffering from phthisis in an advanced stage, pouring into the atmosphere twenty times or more a minute, twelve hundred times an hour, some fourteen thousand times in a night of twelve hours, masses of bacilli and torrents of fœtid products of decomposition. My memory recalls several cases where consumption has appeared to have been thus conveyed from husband to wife, from wife to husband; from mother to child, and *vice versâ*.

I RECOLLECT once attending at Mentone a typical case of the kind, a most instructive one, which made a deep and lasting impression on my mind. The patient was a tall, muscular, handsome young man of twenty-seven, a captain in Her Majesty's service, who had all his previous life been a model of health and strength. He was born and had been brought up in the Highlands of Scotland, and had scarcely known a day's previous illness. His family antecedents were perfect, no phthisis or other known taint existing. He had been serving in New Zealand, and came home with a young wife in an advanced stage of consumption, with large cavities in her lungs. They were four months at sea. She gradually got worse, and died three weeks before the ship arrived. They occupied conjointly a small cabin, the window of which was seldom or never open during her lifetime; thus he was constantly breathing the bacilli and the putrid exhalations from her diseased lungs.

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THIS unfortunate young man was absolutely in the same condition as the dogs, into the kennels of which the putrid sputa of consumptive persons was injected daily for an hour, mixed with water, as a spray, for weeks, by the late M. Thuon, of Nice. All the dogs were infected, and found to be labouring under pulmonary tuberculosis when they were subsequently killed. My patient had clearly been infected by his wife, for a few weeks after his arrival in England he developed symptoms of phthisis, and was in an advanced stage of the disease when he came to me in the autumn. All I could do in the course of the winter was to prevent him getting worse; and I heard of his death a year or two later.

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ONE case of this kind, well authenticated, ought to be sufficient to rouse the attention of the profession and of the public to so vital a question. A diseased person, in trying to save himself, has no right to infect the sound public. Advanced consumptives ought not to be allowed to travel by sea, in the present state of science, unless they can be isolated in single well-ventilated cabins. I myself, a consumptive cured more than a quarter of a century ago, should now refuse to travel at sea in a cabin with a consumptive fellow-traveller, in advanced disease, as I should refuse to inhabit the large hotels in the Engadine, where scores, nay hundreds, of consumptives in all stages of disease, now congregate every winter, poisoning the air which they breathe, in a climate where free ventilation,—ventilation as I understand it,—appears to me an impossibility. A friend of mine, a

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scientific physician, Dr. Jacoby, of Nice, tells me that he found tuberculous bacilli in the atmosphere of one of these hotels in July.

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AT the same time," says Dr. Bennet, "I am not a contagionist. Under reasonable, rational precautions I believe that contagion seldom takes place from the sick to the sound. If ventilation is carried out where consumptives live and breathe, as it is carried out in cases of typhus fever,—that is, if free external air is constantly admitted into the inhabited room, and constantly allowed to escape day and night,—I believe that there is then no more danger in one case than in the other. I cured myself by free ventilation in advanced disease twenty-nine years ago, principally; and I have cured shoals of others in the same way. The doctrines of free ventilation now advocated by Dr. Brown-Séquard, and by the German doctors, have been all forestalled in my practice and works for more than a quarter of a century. I lived all that time in winter in a hotel surrounded by consumptive patients, and can scarcely recollect a case of apparent contagion whilst under my charge. But, then, if my patients would not ventilate freely, day and night, I threw up the attendance." Dr. Bennet says that the subject of "consumptive fellow-travellers" should be freely discussed, and in this light I am pleased to give his remarks in full for the benefit of my readers.

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A WRITER in the American *Monthly Microscopical Journal* calls attention to what seems to be a real danger (long ago ventilated in HEALTH) in connection with the kissing of the Bible in courts of law. "The lips," he says, "are most sensitive to the reception of disease-germs, and from the motley throng of dirty and diseased persons who appear in court and kiss the Book, what infectious germs may not be obtained through this medium of distribution? It would be interesting for microscopists to examine such greasy and worn backs of court Bibles as they can have excess to, and to report the kinds and amounts of bacteria found thereon. . . . In a Massachusetts school where scarlet fever and measles had prevailed, some text-books fell into disuse, were put away for a time, and, when wanted, got out and redistributed, several months having elapsed. In but a few days after the re-issue of the books the children began to come down with measles. There can be little doubt that scarlet fever is transmitted in the same way."

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I OBSERVE that the first cremation in Paris has been carried out at Père Lachaise. Dr. Jacoby, of the Bashkir Tartars, set fire to the apparatus containing the body of his son Paul, eleven years old, and in an hour and a half the body was reduced to ashes. Special permission had been obtained from the authorities.

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THE inhabitants of St. Ambrose, Canada, observing an unpleasant taste in the water, had the reservoir examined, and the bodies of eleven children were fished out. The *American Architect* does not think that the inhabitants of a small village where eleven children could be murdered within a short time without any inquiries being made after them need be very squeamish about the taste of the water they were drowned in, but there seems to be some dissatisfaction, so the reservoir will be cleaned. It is suggested that if the people who murdered the babies were caught and hung in conspicuous positions around the reservoir it might be useful, if not ornamental.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE SIGNS OF DEATH.

BY DR. ANDREW WILSON.

SECOND PAPER.

AFTER his exhaustive exposition of the conditions and appearances which may simulate life in the dead person, Dr. Richardson proceeds to detail no fewer than eleven tests which are capable of being applied to settle the question of decease. He warns us that it is futile to rely on any one sign or test. It is rather the combination of tests which give us a fair and just consensus of opinion regarding the question of vitality or no vitality in any doubtful case. This is an example of the true spirit of scientific practice. The mere empiric is always given to vaunt abroad the value of his one infallible sign, process, drug, or means of cure. The man of science, on the other hand, knowing well the difficulties of the investigation he undertakes, exercises caution in asserting that any one sign can be relied on for an absolute proof of death—up to a certain stage of things, at least. Such a sign as the presence of decomposition and decay would, in itself, be conclusive.

Taking Dr. Richardson's "signs of death" in the order in which he gives them, we find him first of all discussing that most familiar of all the accompaniments of death, cessation of breathing. The "last breath" is a familiar phrase to us all, and its use tacitly includes the idea or expression of belief that when breathing ceases life has gone. Now, this statement, it is easy to show, involves a popular fallacy. By "breathing," in the common sense of the term, is meant the obvious rise and fall of the chest, and the exchange of oxygen for carbonic acid gas and other waste matters, which it is the function of the lungs to excrete and get rid of. But it is very certain that life may be present in many cases in which the *obvious* signs of breathing are not to be detected at all. There is such a thing as life at very low pressure. The half-drowned man who is revived after two or three hours hard ambulance work at artificial respiration, and exhibits at first no sign or trace of breathing-movements, may be cited as an example of the delusion that a want of the obvious movements of the chest necessarily implies the cessation of life.

Dr. Richardson tells us regarding this first sign that "although useful in a general sense," it "is not by any means reliable. It is quite certain that in poisoning by chloral, and in catalepsy, there may be life when no external movement of the chest is appreciable. The same holds good in respect to the respiratory murmur; it may be quite undetectable during life. The old breath test,

> 'If that a feather move across the breath,
> Still life remains.'

is too fallacious to be of any real service; and another test, of holding a mirror over the nostrils and the mouth, to see if the surface of the glass is coated with moisture, is even more fallacious, a passive exhalation of water being quite sufficient to produce the deposit of moisture on the bright reflector, even when life is quite extinct."

Equally popular is the idea that if one is unable to detect the sound or beat of heart or blood-vessel—the "pulse," in short—death is to be regarded as a certain event. Let us hear what our author has to say on this second head. "Equal doubt attends the absence of the

arterial pulsations and heart sounds. It is quite certain that the pulses of the body, as well as the movements and sounds of the heart, may be undetectable at a time when the body is not only alive, but actually recoverable. Of the two signs—the pulse and the sounds of the heart—the pulse is most important. In examples of suspended life, where the life is being maintained without the external manifestations of it, the heart is working at what may be called low pressure. In the year 1868, I witnessed this in an animal under the influence of chloroform, where the chest was laid open, and the breathing was artificially sustained by the double-acting bellows. For a time the heart was seen to be just moving in rhythm, in all its parts, but contracted altogether to full one-quarter its natural bulk, and working at low pressure.

"Suddenly it underwent a general and complete expansion, accompanied with the most vigorous and powerful action, and followed by movements of the body generally, with signs of returning life, so that chloroform had to be immediately re-administered, when the low pressure was once more introduced, and the animal was allowed to pass into death. I should call this state of the circulation the cataleptic, the syncopal, or hibernating circulation; a movement of circulation just sufficient to keep the vital processes going, but utterly insufficient to afford the external proofs of existent vitality. The same state of reduced circulation existed, I suspect, in some experiments of mine, recorded in the Croonian Lecture on 'Muscular Irritability after Systemic Death,' where, under the influence of amyl nitrite and of cold, animals were held, in some instances for several weeks, in such a condition of suspended animation that no sign of life could be detected until they began rapidly to resuscitate."

In connection with Dr. Richardson's interesting remarks, I am reminded of the case of Colonel Townsend, which occurred during last century at Bath. The peculiarity of this gentleman was a power of stopping *at will* the movements of chest and heart. This was witnessed by his physicians, and was doubtless due to his possessing a power of nervous control over these movements which is wanting in ordinary individuals—just as certain persons can return food to the mouth at will; an act impossible in most of us save under the influence of conditions exciting vomiting. This much, at least, is certain, that, whether or not there exists some latent or inherited power in the human subject of sustaining life under very low pressure as far as the circulation of the blood is concerned, we do meet with cases which prove how delusive is the test of the apparent cessation of the heart's work as a rule of death. Far from being absolute, it would appear, by itself, to be very untrustworthy indeed.

"Vein-pressure," as a sign of death, according to our author, "is one of the very best and readiest of all." He tells us that "it is carried out by placing a hard substance, like a bit of millboard, on the forepart of the wrist, so as to prevent pressure on the radial and ulnar arteries: then a fillet is tied firmly round the wrist, so as to compress the veins at the back of the hand. If upon this, the veins after a time fail to enlarge, there is *primâ facie* evidence that no circulation is going on, and that life is certainly extinct." Dr. Richardson takes care to add that "it would be wrong to presume that this test alone is sufficient to disprove the fact of life; but it is one," he concludes, "which least of all is likely to deceive." This test, it will be seen, depends on the fact that the blood in the veins is returning to the heart and lungs for purification. The veins when compressed swell on the lower side of the obstruction, as one may see by clasping one wrist tightly with the other hand, and watching the swelling of the veins on the back of the hand below the obstructing fingers.

The next test is that of the "reduction of temperature." The natural heat of the body is 98·5 Fahr., hence the temperature test may be regarded as presenting us with a very fair sign of death, when its lowness reaches a point apparently incompatible with the carrying on of vital action. But here, again, there is no absolute limit of certainty. Lower animals and plants can bear freezing; and man can bear, in his turn, a reduction of temperature of 7 degs., and yet recover from this terrible physical trial. Again, after death itself the temperature may remain high; and while the heat of the external air may tend to retain the dead body's heat, it may also "favour the suspended animation of a still living body." Our author says that if the temperature of the cavities of the body (*e.g.*, mouth) be found to be below the outer air, or reduced to 80 degs. Fahr., "the evidence is strong that life does not remain."

Rigor mortis is the technical name given to the "death-stiffening," which is so characteristic a sign of decease. Referring to this condition of the muscles, Dr. Richardson says it is one of the "most certain proofs of absolute death." But then, it is a condition liable to great variation. Excessive cold may produce rigidity of body, and there are drugs which produce this state of the muscles. In some forms of death, *rigor mortis* is either of very transient nature or does not occur at all. Death by lightning is quoted in this relation. So that the rapid or momentary occurrence of this rigidity might complicate matters very much, if, expecting it duly to appear, the observer were led to assume from its non-appearance that the body was not dead. If we can be sure of the existence of this stiffening of the muscles (which depends on a very remarkable chemical change in the body's vital tissues), then we may assert that death has really occurred.

(To be concluded.)

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Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

NOSE-CATARRH.

There is no more prevalent disease than catarrh of the nose-passages. The reason of this is not far to seek. It is mainly because the lining membrane is subjected to cold air, hot air, warm air, dust, and all the evil influences the atmosphere can exert; and so after a time becomes chronically inflamed and thickened. But is all this a serious matter? To a certain extent—yes. The chief office, be it noted, of the interior of the nose is to strain and warm the air before passing into the lungs. To do this work effectually there are situate within each nostril three sets of bones (covered with mucous membranes) which are rolled upon themselves like scrolls. Through these scrolls it is really that the air has to pass. By far more air is thus warmed and strained, than would otherwise be possible.

These bony scrolls are associated with the sense of smell, and in some animals, such, for example, as the dog, they are much more elaborately developed than in man; and thus we find the sense of smell much keener in the former. What is catarrh? An inflammation of a mucous membrane, accompanied with more or less discharge, is perhaps a good popular definition. Sometimes the discharge is mucous, and whitish or nearly colourless; and again, it is purulent and yellowish, and sometimes streaked with blood. The condition known as catarrh is one in which the tissues become permeated with extraneous cells, and in which the tissue-elements themselves seem to have but one potential property, viz., that of dying.

Catarrh of the nose-passages may extend along the passages until it has produced catarrh of the throat. Catarrh of the throat, in turn, it is alleged, may extend downward till it causes bronchial or gastric disease, and even in the end consumption.

The ease with which catarrh may frequently be cured renders it all the more remarkable that so many should be troubled with it so long, for we have known it to last for many years. If an absolute cure is to be effected, obviously the mucous membrane must be cleared of inflammatory deposits, when the thickening will quickly vanish. The best means of accomplishing this end is afforded by the Chloride of Ammonium Inhaler (Vereker), the fumes of which penetrate to the remotest regions of the respiratory tract. The action of chloride of ammonium upon catarrhal affections is simply marvellous. One of the most successful physicians the writer ever knew enjoyed most repute for curing catarrhs. He prescribed ammonium chloride for them.

It may very naturally be inquired, how is it that chloride of ammonium vapour has not been used more? Simply because the generality of inhalers are radically wrong, often doing more harm than good, by reason of the irritating fumes they generate. The Vereker Ammonium Chloride Inhaler, however, is of different cast entirely. It may be employed with perfect safety; when once prepared, it is always ready for use; its fumes are uniformly neutral, and altogether the apparatus is simply perfection. Even deafness due to catarrh has been cured by it.

In some persons there is a low grade of nutrition, a condition ofttimes allied and verging on consumption. In such cases reliance must be placed on one thing mainly, and that one thing is fat or oil. And before all other oils stands for such cases cod liver oil, and of all forms of cod liver oil the Kepler Solution is by far the best. With the Vereker Inhaler it will do the work in most cases.

THE FAITH CURE DELUSION—A PROTEST.

By Leonard W. Bacon.

The timid souls who, in these latter years, have been suffering under an anxious dread lest the tendencies of science should carry the whole world into hopeless materialism, may well pluck up heart as they regard the latest phases of popular medicine. The novelties that are just now most talked about under the titles of "Mind Cure" and "Christian Science" and "Faith Cure," are as far removed from that gross form of error as can well be conceived.

The first of the three is an artless application to the subject of pain and disease of the well-known Berkeleian argument for the non-existence of the material universe, the "argument which admits no refutation and produces no conviction." Since sickness and pain are only forms of consciousness, having no objective reality, what more obvious than that they should be treated as such? The seat of disease being the mind, let the mind be treated with mental influences, and not the body with drugs—admitting, for a moment, the popular prejudice that there are such things as drugs and bodies. This method of dealing with illusive diseases by an illusive treatment at the hands of an illusive practitioner has much to recommend it, if only it can be consistently carried out. But at one critical point, so far as we are informed, it has constantly and conspicuously failed. The fee of the physician (or "metaphysician," as he delights to call himself) remains, up to the present date, a hard, metallic, refractory, and objective fact, which obstinately refuses to immaterialize itself. Until the mind cure makes the final and splendid advance by which the doctor's bill shall be satisfied through his inward contemplation of ideal gold and greenbacks, its chief value must continue to lie in the popular protest which it makes against materialism by means of its funny books and its considerable number of devotees.

Concerning the "cure" which advertises itself under the trade-mark of "Christian Science," we would speak with the diffidence becoming to those not fully informed. It may be sufficient to define it as neither Faith Cure nor Mind Cure, although something like both of them; the professors of each of these curious arts finding it necessary to denounce the other two as humbug and charlatanry, and to warn the injured public that they themselves have "no connection with the shop over the way."

The distinction of the Faith Cure, with which we have to do in this article, is that it has nothing to do with science, whether mental or physical, but plants itself boldly and exclusively in the domain of the supernatural. It relies upon an alleged Divine promise which it claims to find in the Epistle of James,* and consists in abstaining from medical advice and treatment of every sort, and in sending, instead, for the male or female practitioners of the "cure," who apply, instead, a sacramental "anointing with oil," together with prayer. It is claimed that the Divine promise is express, clear, unmistakable that the anointing and prayer shall be followed by the healing of the sick, although when this fails to

* Chap. v. 14, 15.

follow there is always some adequate explanation at hand to save the credit of the Divine word. And it is further claimed that in the devotees of this system we have a shining example of primitive and apostolic piety, a childlike faith, an obedient following of the letter of the Divine word, which puts the rationalizing half belief of ordinary modern Christians to shame.

This latter claim is not to be tolerated. It is often treated with a most mistaken patience. It is quite without foundation. Among these "high-livers" and "faith-curers" there are some more or less intelligent people, some good people, and some not so good. As we meet them casually we commonly find them pitiably bloated with spiritual self-conceit. Their childlike following of the Scripture is apt to stand in a huge delight in their favourite scraps of the sacred text and their favourite blunders of interpretation. As a class, they are no whit better than the plain, ordinary Christian who loves God and his neighbour, does his daily work faithfully, and pays his debts a hundred cents to to the dollar; and in point of humility and meekness and intelligent understanding of the Scriptures they are decidedly worse.

The notion that it is binding on Christians, in case of sickness, to refrain from calling a physician and from resort to medical treatment, and to rely exclusively on prayer and sacramental unction, is founded on the following two verses of the Epistle of James: "Is any among you sick? let him call for the elders of the church; and let them pray over him, anointing him with oil in the name of the Lord: and the prayer of faith shall save him that is sick, and the Lord shall raise him up; and if he have committed sins, it shall be forgiven him."* Does this look like the instituting of a sacrament of religious unction for healing, to be observed by all Christians? It occurs in a series of practical instructions addressed to the "scattered" saints of a certain region, as to their duty in certain exigencies then pressing and impending. It is found in this epistle only. There is no allusion in the other apostolic writings to the practice of such a sacrament, nor is it recognized in the early church after the apostles' days. Here is scanty evidence of the solemn instituting of a sacrament of healing for the universal church. Look a little closer at the words. The "anointing," how is it spoken of elsewhere in the New Testament?

1. Sometimes in a religious sense; but in this case always, without exception, metaphorically, by a natural figure of speech drawn from the symbolical or ritual use of consecrating oil in the Old Testament. It is a significant fact that in this sense there is no record of the literal use of oil in the New Testament. The sacramental word χρίω, *chrio*, with its derivatives, *chrism* and *Christ*, is used to signify consecration, or an "anointing of the Holy Spirit"; never otherwise.†

2. Anointing is sometimes spoken of in the New Testament in a secular sense, with reference to its cosmetic, antiseptic, hygienic, and medicinal uses. And for this sense a wholly secular word is used, αλείφω, which is never used in a religious application. Says Archbishop Trench:* "Αλείφειν is the mundane and profane, χρίειν the sacred and religious word." The former was used of the rubbbing down with oil which was given to a bather coming from the bath or to wrestlers in training for the circus. The trainer, or ring-master, of the circus was called ἀλείπτης, the man that does the oiling. And this word came to be used in a general way of one who was prepared for any enterprise, to say that he was "oiled up" for it.†

Of course, this is the very word to use for the medicinal use of oil as an embrocation. This use was very common and important in the therapeutics of that age and region. We happen to possess abundant contemporary illustrations of this. Celsus, a medical writer under Augustus and Tiberius, speaks repeatedly of friction with oil in fevers and in many other cases. Pliny‡ recommends bathing with oil. Josephus, contemporary with James, mentions an oil bath as part of the treatment of Herod the Great in his last sickness. There are like instances in the Scriptures. Isaiah§ describes a neglected sick man covered with ulcers, which had not been treated with oil as they should have been. The Good Samaritan, practising the surgery of the period, poured oil and wine into his patient's wounds. Such facts throw light on the mission of the twelve disciples narrated in Mark vi. 13, who "anointed (ἤλειφον) with oil many that were sick, and healed them," joining to their prayers and benedictions the use of a universally approved curative application.‖

So much for the "anointing with oil." And now what is the meaning of "sending for the elders of the church"? A very weighty, useful, and instructive meaning. This body of gifted men, the leaders of the Christian brotherhood, included men endowed with talents fitting them to serve their fellow-believers, not only as leaders in worship and teaching, but also in more secular needs. These "gifts" were not necessarily miraculous. The catalogue of them in the First Epistle to the Corinthians¶ makes separate mention of the gift of miracles among other gifts which clearly were not miraculous. And a notable fact it is, with an important bearing on our subject, that the gift of healing is not included in the gift of miracle-working, but is mentioned separately with gifts of another kind. Among the talents bestowed for the good of the church was a talent for teaching, a talent for exhorting, a talent for managing affairs, a talent for giving money, a talent for comforting the sick and sorrowful,** and a talent for treating diseases.

There is not a particle of evidence that this last gift was any more miraculous than the others, but there is distinct evidence to the contrary. In the apostolic days a thing did not have to be miraculous in order to be Divine. If a member of the church had a recognized talent for treating diseases, just as if he had a talent for making money, he must hold it as a trust from God to be used for the benefit of men; and this, with the growing skill that would come with each year's experience and observation, was none the less Divine for being purely human and natural. It was the counsel of a wise spiritual

* Chap. v. 14, 15, R. V.

† One thing would seem to have some bearing upon the laborious arguments that have been set forth to show that the story of the four Gospels was devised in order to correspond with the prophecy and the expectation of a Messiah, viz., the fact that no one of the four makes any claim that Jesus was a Messiah—Anointed—at all, in the literal and historical sense of the word. It should be added that, while the above-named Greek words are restricted absolutely to the religious use in the New Testament, the compounds ἐγχρίω and ἐπιχρίω are used in a medical sense.

* *Synonyms of New Testament.*

† See references in Pape's *Greek-German Lexicon.*

‡ A.D. 23-79.

§ Chap. i. 6.

‖ It has been reasonably suggested that the contrast between the hygiene of the ancients and of the moderns at this point is not necessarily to the advantage of the latter. The former habitually followed the bath with an oiling; we, on the other hand, habitually employ a chemical preparation in the bath to dissolve away whatever oily secretion nature has furnished to the skin.

¶ Chap. xii. 8-10. ** Romans, xii. 6-8.

leader, given apparently in a time of some prevailing epidemic, that at the first outbreak of sickness in a family, instead of beginning on the case with a little amateur domestic practice, or with some simple prescription from the neighbours, or with the incantations of some heathen quack or "medicine-man," they should send at once for the gifted and experienced professional physicians of the community, as well as for the spiritual counsellors and comforters.

This text in James begins to grow lucid in the light of other Scriptures, and not only lucid, but luminous. How congruous it is, as we now read it, with the plain, hearty, Divine-human common-sense that is the pre-eminent characteristic of this epistle throughout. It clearly teaches the very opposite of what it has been made to teach.

1. It is a square rebuke of those religious enthusiasts who allege their faith as an excuse for neglecting their duties. The writer has this class of pretentious believers in his mind all along. They are hearers, but not doers, he says. They take on the show of religion, but do not bridle the tongue, nor keep themselves unspotted from the world. If a brother or sister lack clothing or food, they comfort him with a benediction, "Go in peace; be warmed; be fed." Their faith, that they make much of, is like a dead tree, it never bears fruit. James seems to have seen much of those "higher-life" people, who live in so lofty a spiritual atmosphere that they cannot come down to concrete duties. But in this place he aims his rebuke at that particular class of enthusiasts who apply their antinomianism to the subject of medical practice, and say: "Don't send for the doctor; don't give the patient the benefit of any medicine or any surgical treatment; let him alone and send for some of the sisters, and will have a little prayer-meeting instead." "No!" says James—and we may imagine the indignation with which he would see his words of sober wisdom perverted to the support of the very folly which he was denouncing. "Send, indeed, for the ministers of truth and spiritual comfort, and join your prayers above the bed of your sick friend; but do not delay sending also for the Christian physicians who are members of the same company of elders. Do not fail to pray for your friend, but with all your praying be sure you do not forget his medicine. Rub him with oil." Doubtless there is promise in the Scriptures to the sick believer, just as there is to the poor and hungry believer. The promise is no more distinct and faithful in the one case than in the other. There is positively not one particle more of encouragement there for a "faith hospital" without physicians or medicines, than there is for a faith hotel with neither kitchen nor victuals nor cooks.

2. There is a distinct caution, in this much-abused text, against quacks, and charlatans, and clairvoyants, and mediums, and seventh sons, and natural bone-setters, and Indian doctors, and the whole miserable and mischievous rabble-rout of traders in the fears, the ignorance, and the pagan superstitions that still linger among us, in high classes as well as in low, to the shame of a Christian civilization. To what extent the common medical practice of James's time was involved with idolatrous or superstitious incantations, we have some curious indications surviving to our own day. In his excavations in Babylon, Mr. Layard found a curious collection of bowls inscribed within with adjurations of all sorts of spirits by name, and bearing unmistakable indications of the medicinal liquids they had once held. The capital R with which your family physician heads his prescription, believing it to stand for "Recipe," in James's time was seriously understood to be an appeal to Jupiter for luck. This command, "anointing with oil in the name of the Lord"—the Lord that made heaven and earth, whose is the course of nature, in whose hand are the springs of life and of death—is at once a rebuke to the base superstitions that are at the root of all quackery, and the warrant of a devout, sober, and reasonable science of medicine.

3. Some of the good, honest souls who are counted among the devotees of the Faith Cure will be shocked or grieved, or outraged and indignant, at being told what is, nevertheless, true, that what they vaunt as a high and noble form of faith, from which they look down with gentle pity upon their fellow-Christians, is really a subtle form of practical atheism. "Do you not, then, believe in Divine healing?" is the question compassionately put to us by these well-meaning folk, in a tone which conveys an implied threat of praying for us. Certainly, we answer, we do not believe in any other kind of healing. We have learned from the Apostle James that all healing is Divine; that when the trained sagacity of experienced physicians has been employed, and the treatment which the best science of the time approves has been faithfully applied, with trustful and filial prayer, we are still to remember that not the physician nor the treatment has been the supreme and deciding cause, but a Power above and behind and in them all; that it is the prayer of faith that has healed the sick.

It is a keen remark of a woman whom no one will accuse of an unreasoning zeal for orthodoxy—of Frances Power Cobb—that there are some minds so illogically constituted that when they discover the method and means by which a thing is done, they leap at once to the conclusion that no one has done it. The remark was originally aimed at the scientific atheism which dismisses God from the creation. But it is hardly less applicable to that very superlative sort of Christian faith that is ever "seeking after a sign," that cannot see God in common things, in clear and customary and intelligible sequences of visible cause and effect, and that conceives that nothing can be really Divine unless it is queer.—*The Forum.*

Bathing upon a full meal has long been considered dangerous. The physiological explanation of the peril is, that the blood in digestion tends toward the alimentary tract, leaving the brain proportionately anæmic, and the action of the heart and lungs impeded by a distended stomach. A cold immersion at this stage naturally inducing a tendency to syncope, and concentrating surface-blood still more about the central organs, the heart finds the labour imposed upon it too great, and finally succumbs.

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"In bringing up a child, think of its old age."—*Joubert.*

LEARNING TO WALK.

By William Buckingham Canfield, A.M., M.D.,
Visiting Physician to the Union Protestant Infirmary, Baltimore.

The ability to stand erect and to walk is not such a simple matter as it would at first appear. Indeed, it almost seems a wonder that so many strong, straight-limbed people are in the world, when we consider how large a part of the world's population is forced to stand up at an early age and join in the race for a living. In the anatomical construction of man there are many points which would seem to prove that he at one time spent his life on all fours; now, however, his position is the erect one.

As preliminary to walking, an infant first learns to hold up its head; then to sit up, then to creep, and finally to walk. Now in the development, the head of the infant so far outstrips the body in the period before birth that at birth the normal infant has a head all out of proportion to the size of its body, and in the next few years the body grows up to the head, the head gaining little in size in proportion to the body after the seventh year, while the body goes on to grow after the age of puberty. For the first few months of its life, therefore, an infant should always have support for its head, for the neck-muscles are not strong enough to support it unaided. In the third or fourth month the infant begins to try to hold up its head; and, probably, by the end of the fourth or beginning of the fifth month the majority of children possess this power. Still, it is only a power of the will, and not involuntary, for even in adults we notice (especially in church) how easily the head falls to one side during sleep when the individual is in the sitting posture.

The period at which an infant first sits up varies somewhat. Some infants are able to sit up at the third month; but these are exceptions. An infant retains its prenatal position for some time after birth, and this in part prevents it from sitting alone. Let an infant be freed from its clothes, and let it be observed as it lies on the bed. The limbs are generally seen to be drawn up against the body, while the soles of the feet are turned towards each other. The reason why some children sit up sooner than others is partly because some are forced, while others are let alone to do as they wish. This latter is the proper plan. An infant should not be taught to sit up until it shows an inclination to do so by its attempting to sit up.

The next step after sitting up is creeping. This is not very easily done at first; but when once learned, the short interval between that and standing is soon bridged over. An infant, if left alone, may be seen to make its first attempt at creeping in the endeavour to reach some object or to come to some one. This first step in progression is naturally hailed with delight by the fond parents, and there may be a wish here to push the child to teach it to walk. This is a great mistake. It should be allowed to creep about undisturbed, and when it shows a desire to stand up by trying to lift itself up on an object, then a chair, or some object properly protected, should be pushed in its way and further developments awaited. Here again the child should not be forced, but proper assistance may always be rendered by taking under each arm and carefully steadying it in its walk. The practice so common among nurses of taking the child by one arm and dragging it along at the risk of an injury cannot be too strongly deprecated.

An old Vienna physician used to recommend mothers to put the infant in a protected place on the floor, and surround it with attractive objects placed at some distance and await results. The undeveloped condition of the young infant and the softness of its bones render it particularly liable to deformities if great care be not taken. Generally, artificial supports to help children to walk are injurious; but, probably, some readers may remember the Italian children, who are taught to walk in a light, straw machine, shaped like a crinoline, which so fits under the arms that the child can run about well supported, without danger of falling. The great disadvantage of all such apparatus is that continued pressure on the imperfectly-formed chest of a young child may be injurious. When once the infant has learned to walk by holding on to chairs, it may become brave enough to go a few steps without support, especially if the mother or nurse stands with open arms to receive it. All children seem to like to attempt to stand, especially when some one holds them under the arms. In this respect, as in many others, children differ widely, one occasionally standing as early as the seventh or eighth month, whereas others do not attempt it until after the first year. Imitation has much to do with this; for in families where there are several children together the younger ones generally learn to stand at an earlier age than the older ones whom they have imitated. It is, likewise, difficult to say exactly when an infant first walks. It may learn it instinctively; for even if an infant could be brought up out of sight of adults, it would necessarily learn to walk upright. This is evident to any one who notices the natural position of the eyes and ears in man.

Among the poorer classes the child learns to walk far too soon. The evil results of early attempts at locomotion are seen daily among the poor of our large cities. The poorer children not only are forced to walk at an early age, because the parents have no time to take care of them, but they so often have the rickets, or bone-disease, when the body is large and the limbs are small and soft and are easily bent, making bow-legged or knock-kneed children. When children raised with care are able to stand with ease and walk, the feet should have proper protection. Socks should give way to soft shoes with no heels. Children are generally so clumsy for the first few years of their life that heels on shoes would increase the number of falls to an alarming extent. Mothers seldom give proper attention to shoes for their children. When the foot is forming and growing, the shoes should be comfortable; not too tight, so as to crowd the toes and produce corns, nor too loose, so as to rub the feet. Most children are brought up with the idea that all new shoes are painful, and must be endured as a necessity. In reality, there is no reason why new shoes should not be just as comfortable as old ones, if they are properly made. The shoemaker who puts the foot on a piece of paper, and draws the outline and models the sole thereafter, rarely makes a mistake in his fit. Mothers should also notice whether a child runs down its heels on one side, for such trifles may be the first indication of crooked limbs. Attention should be paid to the gait of children, and the slightest limp should not be allowed to go on without finding out the cause and removing it, if possible. It may be anything from a shoe-peg to the hip-joint disease. When children are old enough to sit at a desk

to read or write or apply themselves, care must be taken that they do not keep one position too long, or in any way to lay the foundation for a curvature of the spine. They should never be allowed to sit long nor forced to work hard at the beginning of their school life.—*Babyhood.*

CHAPS, COLD ERUPTIONS, AND SHINGLES.

The condition of the skin in each of the above-named affections is much the same. A like weakness of the integument predisposes it to any of them. In cold eruptions there are a few watery pimples, called vesicles, about the corners of the mouth or margin of the lips. They arise when one has a cold, when there is indigestion, and from other causes which lower the vitality. True, they are of no significance so far as the safety of life is concerned, but none the less do they give rise to disfigurement, discomfort, and sometimes even pain. The medical term for cold sores and for shingles is "Herpes."

Shingles (or "Herpes Zoster") is in no sense a dangerous disease. It usually appears in the form of little watery vesicles or pimples encircling, like a belt, one half of the body, and running along the course of one of the ribs. Shingles has even been known to appear upon one side of the face and upon one arm. The main discomfort from shingles is the extreme itching, and even pain, to which it gives rise. Sometimes the pain is so intense, that hypodermic injections of morphine are given; but it is a great mistake to administer these, for they affect the health of the individual, and their palliative effect soon wears away. As shingles usually last from two to three weeks, the use of morphine is to be reprehended. Another drug that is sometimes used in shingles is aconitine, the active principle of aconite, or "monk's hood"; but medical science is not familiar with a more powerful poison than aconitine. Its poisonous action is as immediate and destructive as that of prussic acid; far less than a grain of it will produce death in a minute. What, then, is the best treatment that can be adopted in cold sores and shingles?

These are common ailments, and it is well that every one should know how to obtain relief, and a speedy cure for them. The new medicine (Vinolia), which has recently created such a stir in medical circles, proves quite as efficacious in these affections as it has been found to be in eczema. It will relieve the itching in an instant. Furthermore, it is perfectly safe to use in any quantity; it protects the skin from the deleterious action of the air, and affords the tissues opportunity for repair.

Passing to the consideration of chaps, many find that the slightest exposure to a cutting wind covers the hands and face with a deep red blush, and makes the skin rough and chapped. All skins are more or less likely to be affected by atmospheric change, hot water, irritating particles in the air, alkalies in soaps, cosmetics, and so forth. People with delicate skins are especially apt to be afflicted with chilblains, but if they would change the socks or stockings every day, and use Vinolia, not only would they find relief, but generally experience a cure. This agent may be used as a cold-cream, as a protective against atmospheric influences, and applied for irritation of the skin it has proved remedial in cases where everything else failed, and heals up cold eruptions rapidly.

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Healthy Houses

"A happy home must be a healthy home."—*Anon.*

THE DAMPNESS OF NEWLY-BUILT HOUSES.

There is too great haste in occupying a house after its completion. In many places there is such demand for dwellings, and often business apartments, that, as soon as finished, they are occupied. This is especially true of small dwellings. There is more danger in this than is supposed. There is no health in dampness and mould under any circumstances, and in living apartments, where the tendency is toward poor ventilation, the dampness of newly-finished houses contributes largely to ill-health. In the town of Bâsle, Switzerland, a regulation has been adopted which prevents newly-built houses from being occupied until four months after completion. Under many circumstances, so long a time as above specified is not necessary, but it is often well to err on the side of safety. The size of the house, its location, surroundings, the material used, and the state of the weather enter into the consideration of the time necessary in which a building should become sufficiently dry for occupancy. Means resorted to for drying buildings would, of course, receive special consideration.

The chief objection to the occupancy of a building newly finished lies in the danger to health of wet walls. There is more water entering into the construction of a building than one is usually apt to suppose. Pettenkofer estimates that walls in which 100,000 bricks are used will require about 10,000 gallons of water in their construction. This quantity of water is held in the pores of the bricks and mortar until it passes off in the form of vapour, which is a slow drying process unless hastened by artificial means. The inhabitants of such a building will suffer the ill-effects of all this dampness through all the time required for the walls to dry. The ill-health thus occasioned is generally attributed to other causes, bad water, sewer-air, and often the plumber comes in for a good share of the blame when his work is perfect. That sickness is not the result of the occupancy of such buildings is the exception. The manner in which wet walls affect health is treated by the *Medical News* as follows:—

"Damp or wet walls are injurious to health by impeding ventilation and the diffusion of gases, through the closing of their pores by water. Spontaneous ventilation through the walls of a building plays no inconsiderable part in the change of air of our dwellings. Märker and Schultze found that the spontaneous ventilation through one square yard of free brick wall, at 9·50 degs. Fahr. difference of temperature between the outside and inside, amounted to about eight cubic feet per hour.

"Another way in which wet walls are injurious is by disturbing the heat-economy of our bodies. Damp walls absorb heat by their evaporation, and act like rooms insufficiently warmed; they are much better conductors of heat than dry walls, and add considerably to our heat-losses by a one-sided and increased radiation. It is not surprising that diseases commonly attributed to cold, such as rheumatism, catarrhal affections, and Bright's disease, are of frequent occurrence in damp dwellings."

The usual methods for drying houses are the natural ones, which depend largely on the temperature, velocity, and humidity of the air. These can be aided by artificial means—heat, ventilation, and absorbents. Where sufficient time has not elapsed or proper means for drying

have not been employed, care should be taken not to trust appearances too far. The surface of a wall may appear perfectly dry while it contains enough moisture to affect the occupants' health. Fires lighted in such houses will quickly produce damp spots on the surface of the walls, and the accumulation of moisture on the walls removed from the heat is evidence that they are not thoroughly dry; otherwise the moisture would pass through into the outer air. Too much care cannot be bestowed on buildings in rendering them perfectly dry before they are occupied. It is better to wait till the dampness has been removed than to suffer its ill-effects.

THE BLACK HOLE OF CALCUTTA.

The Iowa State Board of Health, in its April bulletin, concludes that few who have heard of the "Black Hole of Calcutta" know the terrible facts that have rendered the place famous and made it the synonym of all that is to be dreaded from foul air and overcrowding.

At eight o'clock on the evening of June 20, 1756, one hundred and forty-six prisoners, officers and men, black and white, and of different nationalities, were thrust into a room eighteen feet square—with two windows on one of the four sides heavily barred with iron—giving to each inmate forty cubic feet of space. In ten hours one hundred and twenty-three were found dead — only twenty-three being alive!

Another instance is where, in 1742, the High Constable of Westminster, London, committed twenty-eight persons to prison, where they were thrust by the keeper into a hole six feet square and five feet ten inches high—the windows being close shut. In a very short time four of the inmates were suffocated!

These facts show the poisonous effects of the human breath—or of respired air. Prof. Brown-Séquard has recently made some experiments that are not only highly interesting, but show why the expired air of man and animals is so deadly. From the condensed vapour of the expired air he produced a liquid so poisonous that when injected beneath the skin of rabbits it produced almost instant death. This poison he found to be, not a microbe, but an alkaloid. His conclusions are that the expired air of all animals contains a poison more fatal than carbonic acid.

It is well for the people to understand these facts. They cry aloud for better ventilation and purer air—for less crowding in home and church and hall and school-room.

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Public Health

"Health is the first Wealth."—*Emerson.*

THE GERM OF DIPHTHERIA.

By C. D. Baker.

It is claimed that "two professors connected with the Pasteur Institute have discovered the generative microbe of diphtheria, and that a preventive of this disease by means of vaccine virus is expected to follow." Should this expectation be realized, the discovery and its successful application will certainly take rank among the most important triumphs in the realm of medical science. The prevalence of diphtheria, especially in the principal cities, and the very large proporton of fatal cases, is little dreamed of excepting by those who are giving special attention to the subject. In Brooklyn, N. Y., for instance, there were 984 deaths in 1888 from diphtheria, which probably represented 3,000 cases. It is safe to say that if the same number of deaths had occurred in the same time from cholera, small-pox, or yellow fever, Brooklyn would be put down as a pest-ridden city indeed.

From four weekly statements of vital statistics issued by the Brooklyn Board of Health, commencing with the date January 12, 1889, and ending February 2, 1889, the following number of deaths from diphtheria appear to have taken place in six of the large cities of the world:

New York	182
Philadelphia	39
Boston	43
Brooklyn	124
London	92
Paris	118

It so happens that the new Hoagland Laboratory connected with the Long Island College Hospital, of Brooklyn, is now conducting a series of investigations in bacteriological science, having been especially equipped for this purpose through the munificence of Dr. C. N. Hoagland, the donor of the institution.

The experts connected with the laboratory are pursuing investigations which lead in the same direction as the discoveries claimed to have been made at the Pasteur Institute in Paris. The laboratory has sent to Europe for cultures of what are claimed to be diphtheria germs, which will be compared with those obtained here. Dr. T. G. Kemp, associate director of the bacteriological department of the laboratory, when consulted, said that the discovery of the real diphtheria microbe, and the adoption of vaccination as a means of prevention, was by no means improbable.

The prosecution of the search for a diphtheria germ, which has engaged the attention of scientific experts for the past few years, does away entirely with the popular theory that the disease can be caused by sewer gas or filth conditions. The advanced investigators now generally agree that the disease is carried by a microbe or germ. Filth and gases emanating therefrom are a means of cultivating the same, and may carry it from person to person and from house to house. In other words, that the cause of diphtheria is diphtheria, and not sewer gas or filth.

As an outcome of the germ theory, Drs. H. C. Wood and H. F. Formad, of Philadelphia, were commissioned by the Government to investigate the subject in its relation to diphtheria, and the results of their extended investigations were published in 1882, as an appendix

to the report of the National Board of Health. They obtained specimens of micrococci (germs nearly round in shape) from persons suffering from diphtheria and representing the disease in various stages. Rabbits, guinea-pigs, and rats were inoculated with the micrococci, and the result was that they soon manifested symptoms of diphtheria—fever, formation of membrane, paralysis, and, finally, death. Later investigations demonstrated the fact that there is still an undiscovered germ, the means for investigating which were not perfected when Drs. Wood and Fomad made their inquiries in 1882. The publication of Loeffler's treatise on the germ of diphtheria, which appeared in 1884, and which fills seventy pages of the quarto volume of the *Kaiserlichen Gesundheitsamte*, worked a very great advance in the search for the true germ of diphtheria. Strange as it may seem, this treatise has never been translated, but its contents are known to those who are giving special attention to the subject. It describes the minute, masterly, and exhaustive investigations into this difficult field of bacteriology, which resulted in the author designating the bacillus (a rod-shaped germ) as the genuine diphtheria microbe.

If the work referred to in the despatch from Paris is the same as that done by Profs. Roud and Yersin, and published in the last number of the *Annales de l'Institut Pasteur*, then it is merely a research confirmatory of the work already done by Loeffler.

Having assumed that the true germ of diphtheria has been, or that it will eventually be, discovered, the interesting question presents itself whether the introduction of the virus into the human system can prevent the person so inoculated from taking the disease. A number of scientific gentlemen who have been consulted on this point express themselves as having faith in the new process, while others claim that inasmuch as a person who has had diphtheria may have it again, the introduction of diphtheria virus into the system by means of vaccination can give no greater immunity from future attacks. On this point it may be said that when the experimenters inoculated sewer rats with diphtheria virus it was found that they did not take the disease, but when field rats were subjected to the same treatment, the usual symptoms of diphtheria soon appeared. It has been urged against the germ theory, as applied to diphtheria, that if there are innumerable deadly microbes constantly floating in the air, how does it happen that one person is affected by them, and not another? The answer is, that the development of the germ, like the development of the seed, depends upon the soil into which it falls. Of thirty healthy children examined by Loeffler, the diphtheria bacillus was taken from the mouths of four of them.

When the system becomes reduced from various causes, it may be from breathing sewer gas, over-exertion, improper nourishment, or neglect, or other causes, then the microbe develops rapidly, and diphtheria is the final result. This may explain why, in apparently healthy and well-guarded homes, cases of diphtheria frequently occur. The germ may be communicated by one child talking with another on the street. Its development depends upon the physical condition of the child to whom it is communicated. If it is well and vigorous, it successfully baffles the effects of the dangerous germ, while if other conditions exist, the germ acts like a spark falling into a pile of shavings.

It will certainly not add to our quietness of mind if it be demonstrated beyond peradventure that the cause of diphtheria is an insidious, an invisible microbe floating in the air, to which all persons are, more or less, subject. But if coupled with this demonstration it can be shown, as a result of recent investigations, that immunity can be given by vaccination, then every lover of his kind will rejoice, and the discovery will be ranked among the greatest achievements of science.

VACCINATION AND RE-VACCINATION.

Dr. Simonetta Luigi relates in the *Giornale della Reale Società Italiana d'Igiene*, No. 10, 1888, that an outbreak of small-pox occurring in November, 1887, at Caponago, a village between Vimercate and Gorgonzola in Lombardy, he obtained from the local authorities compulsory powers for the re-vaccination of all persons who had not already suffered from small-pox. After exempting the latter, as well as 24 chronic invalids, 11 persons over seventy-nine years of age, and 176 vaccinated infants under three years, 22 who were absent on military service, and, consequently, recently re-vaccinated, and 53 only temporarily residents, there remained but 192 out of a population of 1,621 who evaded the operation. Of the 1,110 who were re-vaccinated, 794 gave "positive results," the highest percentage being among persons between twenty-five and thirty years of age.

The cases of small-pox occurring prior to the re-vaccination of the population were 33 in number, of whom 6 died, or rather more than 18 per cent., and 6 more appeared subsequently. Of these, however, 1 showed the variolous eruption only seven days, 2 nine days, and 1 twelve days after the operation; 3, if not all 4, having evidently contracted the disease previously. The remaining 2 did not exhibit the eruption until seventeen and twenty-six days respectively after the operation, which, in the latter, as well as in the one who did so after twelve days, had been successful. It is, however, noteworthy that the lad whose case is the most remarkable as having shown the eruption twenty-six days after successful vaccination, was able to leave the hospital in seven days.

The re-vaccinations were done with lymph diluted with glycerine; only 71·5 gave positive results, the percentage varying from 41 in persons from sixty-five to seventy-nine years of age to 88 in those between twenty-five and thirty, and 85·5 in those under ten. The operations were performed with the strictest antiseptic precautions, and, notwithstanding the insanitary conditions of the majority of the houses, no ill results were observed in a single instance.

Two cases of great interest are recorded, one of a young woman in the fifth month of pregnancy, who, after a severe attack of confluent small-pox, was delivered at full term of a healthy child; and the other was attacked four days after delivery, but made a good recovery. Three vaginal injections of a 1 in 2,000 sublimate solution having been followed by violent mercurial stomatitis, Dr. Luigi substituted henceforth one of 3 per cent. sulphophenate of zinc, and in four days her condition was normal. It would be interesting to know whether the children of these young women were susceptible to vaccination.

For disinfection of the rooms, &c., Dr. Luigi devised a spray-producer connected with a reservoir holding 25 litres (5½ gallons) of a 1 per 1,000 sublimate solution, capable of sending a jet a distance of thirty feet; and we might urge on the authorities of our much-maligned small-pox hospitals two rules rigidly enforced by Dr. Luigi. First, that no nurse was allowed to leave the building without having been previously sprayed over

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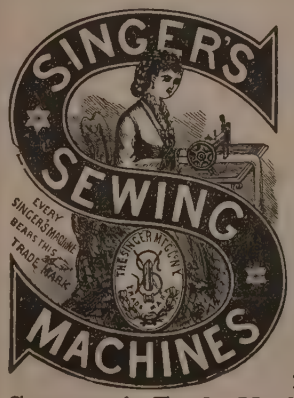

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—*Extract from* HEALTH, *30th Nov.*, 1883.

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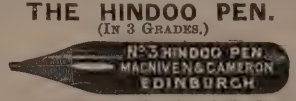
"They come as a boon and a blessing to men,
The Pickwick, the Owl, and the Waverley Pen."

THE HINDOO PEN.
(IN 3 GRADES.)



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the bare skin from head to foot by this means; and, secondly, that the patients, prior to their discharge, were thoroughly disinfected as follows: The hair cut short and rubbed with a mixture of oil of turpentine (9 parts), and eau de Cologne (1 part); the nails of both hands and feet cut short, the whole person cleansed with carbolic soap and then immersed for twenty-five minutes in a warm bath of 1 in 25,000 sublimate solution. All articles of clothing, &c., used by the patient in the hospital or left at home were collected in the disinfecting chamber and thoroughly sterilized before being restored to the owner. Dr. Luigi found half-gramme doses of antipyrin useful in relieving the severe headache preceding the eruption, and for the local treatment of the pustules he used Schwimmer's paste (carbolic acid, 4 parts; creta preparata, 60; and olive-oil, 40; or a modification of the same, with 40 parts of chalk and 60 of vaseline, instead of 40 of oil.

The remarkable disproportion of the sexes among those attacked (7 males and 32 females) cannot, as he seems to suggest, be referable to sex as such, but is more probably owing to a large proportion of the male population having undergone military service, and thus been already re-vaccinated. Such men may have served to swell the number of unsuccessful re-vaccinations, being equally insusceptible of small-pox or vaccination. — *Sanitary Record.*

Peach stains may be removed by putting the article in boiling water before washing it. When the suds have once touched them the stains are set and cannot afterwards be removed.

The Defries Safety Stoves.—Last week we had the pleasure of witnessing, along with many representatives of the press, an extraordinary display of cooking by the newly-invented oil-stoves recently acquired by the Defries Safety Lamp and Oil Company, the display taking place on their magnificent premises in Holborn-viaduct, London. A number of stoves of various sizes were exhibited in full operation, and the joints, steaks, chops, pastry, &c., cooked in presence of the company in a truly marvellous and rapid manner, without demanding any attention, beyond simply noting the necessary time, left nothing to be desired. The Defries Safety Stoves are constructed on a scientific and entirely new principle, without any mechanism or perforated metal, differing in every respect from previous attempts at oil-stoves. There is no possibility of the stove smoking, and the combustion is so perfect that if the flame be turned to its highest or to its lowest power, it emits no odour whatever, which is a most important consideration from a hygienic point of view. Employing one stove which consumes, when at full power, one pint of oil in three hours, nine or ten chops or steaks can be simultaneously *grilled;* large joints can be *roasted;* bread and pies can be baked; and a room sixteen feet square heated as rapidly, and much more economically, than with gas or coal-stoves or kitcheners; and although the entire products of combustion are utilized, yet food so cooked cannot be distinguished from that cooked in the ordinary manner. The stove is, of course, equally suited for boiling, frying, &c., and for heating laundry-irons, and for any of the many purposes for which heat is required for domestic purposes. The Defries Safety Oil Stove, whether for heating or cooking purposes, is certainly the most wonderful and perfect stove we have yet seen, and we have no doubt this stove will become as much a favourite with the public as the famous safety lamp manufactured by the same company.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

HOW THEY MAKE CIGARS IN NEW YORK.

Over 30,000 men, women, and children are employed in the tobacco industry of New York, of whom about 16,000 are cigar makers proper, the rest being cigarette makers, strippers, bunchers, packers, pasters, box makers. More than 6,000 cigar makers are women, girls, and small children. Some branches of the trade are almost monopolized by girls. For instance, the making of cigarettes. The nationalities which predominate among the cigar makers are the Germans, Bohemians, and the English, but there are also quite a number of Poles, Hollanders, Cubans, and Hungarians, with a sprinkling of Spaniards, Americans, French, and Russians.

The best cigar makers are the Germans and Bohemians; the Cubans and Spaniards rank next. The Poles are ruining the trade here by cheap work done in basements in Division-street and its neighbourhood. They work, as it is termed, "below zero," just as the Chinese are doing in San Francisco. The Cubans and Spaniards make a special grade of goods called "Spanish work." Cigar making has of late years become so unprofitable to the working people that the average weekly wage ranges only from 6 dols. to 7 dols. Even the best workers, making cigars by hand, average only 15 dols. per week if working full time all the year round on first-class material, but this fortunate class comprises hardly fifteen per cent. of all cigar makers. The poorest class of workers average only 5.50 dols. per week, and therefore their wives and children must help by their work to swell the income of the family. The working time is about eight hours a day—a result of their strong organization.

Eleven manufacturing firms own tenements in this city, in which they house their workers under the so-called tenement house cigar-making system. These mean firms keep the tenement horror alive by employing 546 entire families. Counting at the lowest estimate five working members to each family would give us the correct number of tenement house cigar makers, viz., 2,830. Each family has either two or three rooms, small, poorly ventilated, and dark. In these accommodations they have to pay 3 dols. more for their monthly rent than they would if they were allowed to live where they liked. But—and here the fine game of the cigar manufacturing landlord comes in—no rooms, no work. So these door people have only the alternative to accept low wages, high rent, and long hours of work (fourteen hours daily on an average), or walk the streets and starve. In these houses, which cannot be called homes, one finds the greatest filth, misery, and degradation imaginable.

To sensitive persons a description of the horrors would be insupportable. It is happily true that "one half the world does not know how the other half lives." Cannot these conditions be amended or abolished? For years the cigar makers have banded together in unions to suppress this terrible, inhuman system. Some headway they have made in their endeavours—for which they have been called conspirators and revolutionists. If American workmen were obliged to live in this manner, they would have been revolutionists long ago.

There are 1,800 cigar factories in New York City. Of these the great majority employ from one to fifty hands each. Large factories, of which there are 350, employ from fifty to 500 hands, while the largest class of factories, of which there are only ten, employ from 500 to 1,000 hands. The vital statistics gathered in the course of years by some organizations show that among the cigar makers lung troubles are of common occurrence. Women must frequently stop work to recuperate from the bad effects tobacco has upon them.

There is another danger which threatens the cigar makers, and promises to thin the ranks already thinned by competition among themselves. Last year bunching machines threw 400 persons out of work. Yet cigar making machinery is only in its infancy. In the opinion of many cigar makers, the trade is leaving New York City, and will never be as good and prosperous as it was in past years. New York is fast losing its former prestige by manufacturing cheap cigars in too great quantities.

Since 1864 the cigar makers have made determined efforts to organize themselves, and, through organization, to better their condition. They have succeeded in accomplishing a great amount of good to their craft. The Cigar Makers' International Union of America has been in existence for thirty-five years. The number of its members is very large, and probably exceeds 25,000. Of the cigar makers in this city about 8,000 are organized. They stick to their organizations faithfully, and are among the best, most intelligent, and most energetic working men.

Since 1879 the International Union has paid out for strike benefits, 369,833 dols.; for sick benefits, 182,425 dols.; for death benefits, 21,843 dols.; and for travelling benefits, 196,882 dols. The present fund in its treasury amounts to over 253,000 dols. The powerful agitation for the suppression of the tenement house system has resulted in greatly mitigating that evil. Their Union label is an effective weapon against unfair employers, and has brought many of them to terms. At present it is used by 386 manufacturers in this city alone, who have to observe certain rules of the Union for the privilege of using it. Manufacturers who sell tenement-made goods are debarred from its use.

The Meaning of Easter Eggs.—Larousse's *Dictionnaire Universel* says: "The use of Easter eggs is general among all the people of the different Christian communities. It appears to have been a symbolic tradition of the Christian Church, which has been explained in different ways. Some see in it a remembrance of the red egg which, according to Ælius Lampidious, a hen belonging to the parents of Alexander Severus laid on the day of his birth. Others trace it to the martyrdom which was inflicted upon Christians by the *ova ignita*. Among pagans, the egg had a mystic sense, relating to the origin of beings and of the whole world; and it is perhaps the case that this tradition was preserved, along with many others, in the new religion. The most probable interpretation, however, is that the Christian adepts saw in the egg, in view of the phenomenon of hatching, a symbol of the resurrection of Christ; and hence the custom of carrying eggs to the temple on Easter-day to be blessed by the priest, which were afterwards distributed to the family and friends. But it may be that there is in this nothing more than a joyful manifestation on the occasion of having again eggs of which the laity had been deprived during the whole of Lent."

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

Poisoning by Coal-Stoves.—Some alarm has lately been caused by the occurrence of several fatal accidents due to the use of coal or charcoal-burning stoves. Our last issue contained a note by our Paris correspondent quoting the observations of Dr. Lancereaux, to the effect that stoves of this kind, as now constructed and commonly used in Parisian bedrooms, were a frequent source of injury, not only by acute poisoning, but by chronic impairment of health. According to this authority, even fairly efficient ventilation of rooms does not guarantee immunity from the insidious and destructive blood-changes thus occasioned, and the mischievous influence is apt to spread, by way of leaking chimneys, &c., from one apartment to another. In a similar way, the use of cab-warmers filled with lighted charcoal-dust, to which we referred some weeks ago, has on several occasions led to fatal consequences. Nor are accidents of a like nature unknown in this country. Last Saturday, at a village in Wales, four persons were found in the sleeping-room of a small cottage overcome by the fumes from a coal-stove. In the case of two, all efforts at resuscitation failed. In this instance the poisoning of the atmosphere was attributed to the fact that a high wind prevented the escape of smoke from the stove-chimney. Practically identical circumstances appear to have determined the result in other recorded cases. This kind of stove is very commonly deficient in draught. Hence it happens that combustion is slow; the oxides of carbon do not easily escape by the usual outlet, and they consequently find an exit at any other convenient point. We are not aware that the ordinary gas-stove is equally liable to this objection. Thanks to the heat evolved, its up-draught is fairly strong. The facts above stated must, however, convey a caution with regard to stoves in general, and those which burn coal or coke in particular. These latter possess the advantage of economy; but their safe use is only compatible with good heat, a sound and clean chimney, and a free draught, aided, if possible, by a revolving chimney-top. It should be remembered, also, that the combustion of ordinary coal, if more costly, is also safer in respect of its gaseous products than that of coke or charcoal.—*Lancet.*

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Women's Dress.—It is well to wear woollen garments next the skin. The stoutness or fineness may be regulated to suit the wearer and the season. One advantage of having the stockings digitated, will be that the wearing of light pointed-toed boots will be rendered impossible, Stockings may be kept up by suspenders, but there is no harm in gartering them above the knees, as the tendons on either side guard the vessels from pressure. Woollen clothing covering the body from the neck to below the knees, and with sleeves reaching nearly to the wrist may be obtained all in one piece (resembling the male bathing dress used in France); but there is no special advantage in this, and the underclothing is as good in every way in two pieces as when combined. As the chest and abdomen require more warm clothing than the limbs, a long vest, extending from the neck to the coccyx is needful. There is no objection to this being put on first. The linen chemise may be dispensed with, but in no case should it be worn next the skin. Then come the

body, or bodice, and knickerbockers. The material of which these are made is unimportant. The bodice should fit the body neatly, at the neck being an inch or more above the collar-bone, and below being three inches lower than the crest of the ilium. The lower margin overlaps the band of the knickerbockers, which at the back should cross the fourth lumbar vertebra, and pass outwards and forwards, slanting gently downwards. The weight of the knickerbockers and of the petticoat, if one be worn, is thus thrown on the pelvis. Many petticoats are certainly superfluous, and a divided skirt, which may be made of flannel or woollen cloth, will do away with the necessity for one. Finally, there is the body and overskirt, making the dress proper. Let this be as simple as possible; there will yet be room for invention and the display of good taste. In any case it must not be stuck over with bows and knots and useless buttons, or pulled up into a bunch at the back. As for the divided skirt, let no one be afraid of that because it is a pronounced imitation of the male dress and conspicuous. It is nothing of the kind. A lady might wear it for years, and her neighbours and intimate friends be ignorant of the fact. Indeed, it is the simple truth that it is worn by numbers of ladies without the knowledge of their friends.—*Dr. Vacher.*

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Doctors and Fees.—A correspondent of the *Pall Mall Gazette* has collected some items about doctors and their fees, some of which are interesting, though they are not all new, and we are not sure that all are true. Sir Andrew Clark, it is said, allows a notice to appear in his waiting-room informing patients of the amount of his fees; and it is notable that any one whose health permits him to forego the honour of visiting Sir Andrew for two months has the privilege of being considered a new patient again, and is granted a re-examination, only having to pay again the new patient's fee (*double*) for the advantage. The contributor has heard it stated that Sir William Jenner has acquired such an extraordinarily acute muscular sense, that if the fee is handed to him wrapped in paper (as used to be the fashion) he can judge of its accuracy by the weight of the parcel. Some people, it appears, are in the habit of docking the shillings when they pay their fees. The late Sir James Clark, who is memorable to laymen as the Queen's physician, and to the profession as having refused to accept a fellowship of the College of Physicians, which honour they tardily offered him after her Majesty had marked him as a distinguished man and a trustworthy friend, had a peculiarly strong objection to the absence of the shillings. On one occasion, having been paid one pound by a female leader of society, he promptly put on his eye-glasses and began looking about on the floor. "What have you lost, Sir James?" inquired the titled dame. "I was looking for the shilling you dropped your Grace," replied the irate doctor. The "leading lady" produced the shilling and blushed—of course to the roots of her hair—for it is a social axiom that leaders of society always have natural roots. A story is told of the late Dr. Trousseau, the famous Paris physician. This practitioner, it appears, was always suspicious of patients who offered him presents; he thought the present was likely to take the place of the honorarium. One lady, whose child had been restored under the doctor's treatment, was very profuse in her gratitude, and on Trousseau's last visit pressed a small silk purse into his hand. "Thank you, Madame," he replied, "but, pardon me, I never accept presents," and he firmly rejected her offer, quietly adding, "My fee, Madame, is 500 francs." Opening the purse Mdme. la Comtesse took out the sum named, and presenting it to Dr. Trousseau remarked, "I am sorry you do not take presents; the purse contained 4,000 francs." The best story is told of Dr. Forbes Winslow, the late well-known "alienist." He was summoned for a professional opinion to Manchester. Driving in a cab to the address given him, he was surprised to find himself in front of a shop, over which were the words "Builder and Contractor." "How thrifty, nay, how almost parsimonious, are these Manchester contractors!" thought the distinguished doctor, as he was deferentially received by an elderly "Manchester mon." He saw the patient, the builder's wife, certified that she was a lunatic, and was conducted into the shop, where a guinea was handed to him from the till. "My dear sir, I want my fee," gasped Dr. Winslow. "When I wrote you six months ago, sir, you answered your fee were a guinea," was the Lancastrian's argument. "What," said Dr. Winslow, "to Manchester?" "I can't afford no more." "It's cost me £5 to get here." You told me your fee were a guinea; the missus is worth no more, and I ha'n't got it." Forbes Winslow pocketed the guinea, and turning to his impecunious patient, said, "My good man, your 'missus' is a harmless lunatic; you are a dangerous one!" and he galloped off to the station, and shook the coal dust of Manchester from his patent leathers.

Young Wife: "Doctor, I am about to prepare for a trip to Ostend and have come to ask your advice." Doctor: "On what subject, madam?" Young Wife: "You must tell me what's the proper complaint to go to Ostend with."

"Who is your family physician, Freddy?" asked Mrs. Hendricks of the Brown boy. "We ain't got none," said the boy,". Pa's a homeopath, ma's an allopath, sister Jane is a Christian Scientist, grandma and grandpa buy all the quack medicine going, Uncle James believes in massage, and brother Bill is a horse doctor."

Essential Oils.—The value of this class of drugs and the high prices they command are great inducements to dilute them with various adulterants in order to increase the apparent yield. In the distillation of such liquids the principle of economy should not be carried too far, as efficient apparatus, if more costly in the first instance, will in the long run prove the best investment in the saving of waste and in the quality of the product. A steam still would, therefore, be found the most suitable form of plant. Of course, all the ordinary precautions which apply to the use of the still, such as avoidance of too high a temperature, &c., apply with even more force in such operations as that we are considering, where a small proportion of spoiled product will contaminate a large yield. After distillation the oil is stored for a time to allow of deposition, and then drawn off clear and bottled. The oil should be always bright and clear, and when bottled will be best kept in full vessels, which are stored in the dark. How much room there is for reliable and genuine essential oils, and how little confidence is at present reposed in these articles which are imported, may be judged from the fact that some oils are always distilled in this country, such as oil of sandal-wood, while others are obliged to be similarly obtained if an absolutely pure article is required. Such English distilled oil commands higher prices than that prepared abroad, and hence the colonist, who would be careful in distillation and scrupulously watchful to prevent adulteration, would find a good market, and in the end his increased care and trouble would be amply repaid.

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

Health, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Bookstalls, on the day of publication. It may also be ordered from the Publisher, 2, Paternoster-square, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain Health from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following Free Gifts and Bonuses to all who subscribe to Health for one year or longer:—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of Health, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of Health weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of Health so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of Health, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, 'Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to anyone who succeeds in obtaining three yearly subscribers to Health, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with Health should be addressed directly to the Publisher, 2, Paternoster-square, London, E.C., and *not to the Editor*.

Sweeping is far less a frequent need than is supposed. The dust must be removed, but a damp cloth is a key to its removal, and the damp cloth system is a saving of much hard labour, as well as wear and tear to the carpets. Says an authority: "Put a spoonful of ammonia in half a pail of warm water and wipe the carpet with a cloth wrung out from this water. The dust is removed, the colours freshened, and every stray moth,—a possibility everywhere in these days,—finds a sudden end."

Care of the Eyes.—When the eyes have been used for a long time by artificial light and become fatigued, it is a useful plan to have at hand a lotion composed of rose or elder-flower water, two ounces; wine of opium, half a drachm; French brandy, one drachm. Mix, and occasionally bathe the eyes with a fine piece of sponge. The grateful sensation of relief will be at once evident. It will allay inflammation, and preserve the sight.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "The Editor of Health," 2, Paternoster-square, London, E.C. *Those intended for the Publishing Office to be sent to* Mr. A. P. Watt, The Publisher, *at the same address.*

RULES FOR CORRESPONDENTS.

Owing to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the Letter-Box Department of Health, to the following rules:—

1. All questions are answered free of charge in the columns of Health. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of Health, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of Health. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded free to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.

NERVOUS EXHAUSTION.

PULVERMACHER'S World-Famed GALVANIC BELTS for the Cure of Nervous Exhaustion and Debility, have received testimonials from three Physicians to Her Majesty the Queen, and the leading Physicians of nine London Hospitals, including over Forty Members of the Royal College of Physicians of London.

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Dr. H. A. Allbutt, M.R.C.P., 24, Park Square, Leeds, writes, Oct. 1888:—"I always recommend with confidence MR. PULVERMACHER'S BELTS. Ladies recovering from illness incidental to their sex will find these BELTS of vast assistance in restoring lost nerve power."

Dr. C. Handfield Jones, F.R.C.P., F.R.S., Physician to St. Mary's Hospital, says: "I am satisfied that MR. PULVERMACHER is an honest and earnest labourer in the field of science, and I think he deserves to meet with every encouragement from the profession and scientific men."

Sir Charles Locock, Bart., M.D., says:—"PULVERMACHER'S BELTS are very effective in neuralgia and rheumatic affections, and I have prescribed them largely in my practice for other similar maladies, paralysis, &c."

For full Price List and particulars, see New Pamphlet, **"GALVANISM: Nature's Chief Restorer of Impaired Vital Energy."** Post Free from

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6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

FELIX.—[Please note that your letter was addressed to our former office. Read the "Rules for Correspondents," and note the proper address].—There is no remedy save the destruction of the hair-roots by electricity. We can send you address of an Edinburgh specialist if desired, if you attend to Rule 4 to Correspondents. Depilatories only do away temporarily with the hairs, because they do not touch the roots. Why not let the patch grow long, and then dispose it properly with the rest of the hair?

JONIBRO.—1. We do not know the hair-preparations you name. 2. Try Wilson's Puriline Tooth Powder and Puriline Tooth Wash, advertised in our pages.

J. M. WALLOND.—Glad to hear that our advice has done you so much good.

D. PRICE.—Apply to the French Hygienic Society, 6, Conduit-street, Regent-street, London, W., and they will advise you regarding your hair-trouble. For your skin-affection, you should try Vinolia as an outward application, and wash with Vinolia Soap (Roberts & Co., 76, New Bond-street, London, W.). A course of La Bourboule Mineral Water, which your druggist will obtain for you, will also be found useful by you. Use the Water as directed on the bottle.

MRS. MELVILLE.—Rest after your meals, and avoid excess of vegetable foods. Give up potatoes for a time, and take stale bread instead. After meals, when your symptoms trouble you, take five drops pure Terebene on a piece of sugar.

SOHO.—Try a vegetable dietary—stewed fruits, apples or oranges, &c., and whole-meal bread, with Grant's Oat Flour for supper and breakfast; avoid tea and coffee; take Cascara Cordial, twenty drops in water (or two Tabloids), between meals, once or twice daily. Sponge with cold water each morning; sleep on a hard mattress; take plenty of open-air exercise, and avoid fluids and suppers late at night.

E. P. L.—Try the plan of taking a little very light food an hour or so before bedtime—say milk and a biscuit. Avoid tea and coffee, and try Van Houten's Cocoa instead. See that your bedroom is well-ventilated. Bad air is a common cause of the symptoms of which you complain.

CONUS.—Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and note the treatment advised therein. If not cured, send description of food, habits, &c., and we will advise again.

M. G.—Try the following powder:—Sulphide of lime, twenty-four grains; sugar of milk, half an ounce. Mix. To be kept in a stoppered bottle, and as much as will cover a sixpence to be taken every four hours in a little milk. This is a preventive of boils, &c. For the rest, take plenty of vegetables and little flesh meat.

ALBERTA.—What you mention is not at all unusual, and depends simply on excitement. Should the result you apprehend follow, no evil effect whatever need be apprehended in that case.

LAX.—A safe gargle for relaxed throat is made by adding to two and a half drachms of alum an ounce of honey and a pint of rose water. About a tablespoonful should be taken into the mouth at once, and repeated four times on each occasion; the gargle to be so used thrice daily.

CANTER.—Use Bayley's Spermaceti Soap (17, Cockspur-street, Pall-mall, London, S.W.) and soft water for washing, and dust on the palms Woolley's Sanitary Rose Powder. Take a dessertspoonful of Thomson's Cod Oil Cream (Dublin-street, Edinburgh) after your meals while the cold weather lasts.

A. BELL.—The formula for powders for the relief of acidity and indigestion is as follows:—Carbonate of bismuth, ten grains; wood charcoal, ten grains; bicarbonate of soda, five grains. Mix. One such powder to be taken thrice daily, half an hour before meals, when you are troubled with acidity and dyspepsia.

NIP.—Try a lotion composed of one part Friar's Balsam added to nine parts rose water, and applied to the skin. If not cured, write again. Use the Oriental Aromatic Salts to soften the water you wash with. See advt. in our pages.

G. E.—You may derive much benefit from inhaling the vapour of a pint of hot water to which ten or fifteen drops tincture of iodine have been added. Internally, take fifteen drops Fer Bravais in water, after your food, thrice daily, as a general tonic.

S. E. G.—For the falling hair, use the following lotion:—Solution of ammonia, half an ounce; tincture of cantharides, half an ounce; eau de Cologne, one ounce; water, to eight ounces. Mix. Rub into the roots morning and night with a soft sponge or piece of lint.

FAIRFIELD.—Wash the affected parts with Bayley's Spermaceti Soap only till you are well, and apply the following paste night and morning:—Resorcin, one drachm; lanoline, vaseline, zinc oxide, and powdered starch, of each, two drachms. Mix, to form a paste.

ALICK S.—Brush the hair regularly, night and morning, with a soft brush, and rub in a little of the following to the roots each morning:—Eau de Cologne, two ounces; tincture of cantharides, two drachms; oil of rosemary and oil of lavender, of each, ten drops. Mix. Label: "The Hair Lotion."

LODGER.—Take Cascara Cordial, twenty drops in half a wineglass of water, or so, once or twice daily, an hour before meals. Let your diet consist of Scott's Midlothian Oat Flour, milk, milk-puddings, white boiled fish, meat (occasionally only, for a time), stewed fruits, stale bread, &c. Try a cold or tepid sponge bath each morning.

A. TAYLOR.—You might certainly with advantage give a teaspoonful of Syrup of the Hypophosphites (Inman's) in a wineglass of water (twice or thrice daily, after meals) in such a case.

TITUS OATES.—We advise you to consult the French Hygienic Society, 6, Conduit-street, London, W., and use their Pomade Tricophile for the cure of scurf. This society will also be able to advise you regarding the use of a harmless dye or restorative for grey hair.

M. S. B.—Dahl's Cakes (advertised in our pages) and Cascara Cordial—dose of latter twenty drops in water once daily. A teaspoonful of glycerine, used as an enema, is also a capital and safe remedy.

COWAL.—Your system at large wants toning. Try a dessertspoonful of Scott's Pure Cod Oil Emulsion with Hypophosphites, after your meals, thrice daily, and use Woolley's Sanitary Rose Powder for your feet after washing. Change your socks frequently, and wear health-boots—*e.g.*, those of Mr. Scafe of the Leather and Rubber Boot Co., 21, Albion-street, Leeds.

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FOR THE TEETH, GUMS, AND BREATH.

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SURVEYOR.—You must not think of "encouraging" any such thing. Read the pamphlet, "A Lecture to Young Men" (Fifth Edition, post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and note what is therein said regarding diet. You should take fifteen drops of Wyeth's Dialysed Iron, twice daily, in water, after your meals. If the boils continue to appear, use the sulphide of lime powders ordered in advice given to "M. G." in the present number of HEALTH.

PAUL S.—Certainly, give up both alcohol and tobacco. Let your food be plain, but nourishing. Take a tepid sponge bath each morning; and after your meals try a teaspoonful of Inman's Syrup of the Hypophosphites (advertised in our pages) in a wineglass of water as a suitable tonic, twice daily. You need have no fear of recovering your health. Take plenty of open-air exercise.

PRUDENT.—Take La Bourboule Water, which is an arsenical water, regularly for a time (see advertisement in last week's HEALTH). Messrs. Ingram & Royle, 52, Farringdon-street, London, E.C., are the importers, but you can order the water of your druggist. You must beware of tampering with arsenic in any other form. La Bourboule Water will suffice for all your needs. As far as the complexion is concerned, bear in mind that the skin sympathizes with the general health of the body; and that no local remedies can produce a clear, healthy skin if the general health is impaired.

ALICE WARD.—The Zander machines would be likely to benefit you, but you should in the first place obtain a medical opinion regarding the exercises suitable for your case. You may certainly consult the Medical Battery Company, 52, Oxford-street, London, W., who are now the proprietors of the Zander machines. The medical men attached to the establishment should be consulted, and will be glad to advise you with regard to the appropriate nature of the treatment in your case.

E. F. G. H.—You must persevere with the general remedies already prescribed. A condition like yours is often slow, if certain, of cure. Continue your cold sponging, live plainly, and avoid excess of alcohol. Plenty of out-door exercise is a necessity for you. Do not take any tonics or other drugs, as they are not required. Remember also that what you name is often a result rather of excess of vigour than want of tone. There is no fear but that the result you desire is perfectly possible. You suffer from no disease at all. Write again if not bettered.

RODGER.—What you complain of arises from want of ventilation of your hat, which also is probably far too tight for your head. See to these points. Wash the head once weekly with tepid water and Bayley's Spermaceti Soap, and rub a little glycerine of borax into the roots of the hair after it is dried.

TOBY.—You should try the Tabloids of Bicarbonate of Potash, made by Burroughs, Wellcome & Co., and to be had of a druggists. Each tabloid contains five grains, and one is sufficient for a dose. The Soda and Mint Tabloids are also very efficacious. See also advice given to "A. Bell" in the present number. All sweet and acid foods must be avoided, including tea and coffee. For yourself, the same treatment will suffice. If not cured, write again.

DUMBARTON ROCK.—What you name arises simply from a want of common cleanliness. You will find the matter fully explained in the pamphlet recommended to "Conus" in the present number.

AFFLICTED.—Read the pamphlet recommended to "Conus" in the present number, and you will find full information and treatment given therein. You need have no fears for your health, so long as you follow out the rules of life the pamphlet contains.

TRUSTING.—You are simply over-nervous and worried. There is nothing else the matter with you, and all your symptoms arise from your nervousness interfering with your digestion. First of all, follow out the advice as to diet, &c., given to "Soho" in the present number, and read also the pamphlet recommended in advice given to "Conus" above. By attention to these details you will recover your tone. See that you rest after your meals regularly.

W. B.—Apply to the Coventry Machinists' Company, Holborn-viaduct, London, E.C., for one of their catalogues, and note their recent machines described therein. Mention HEALTH as your reference.

G. S. S.—1. Apply to Mr. Pulvermacher, 194, Regent-street, London, W. 2. The phosphate of lime is the bone-salt you mean—not pure lime.

E. PARSONS.—We have not heard of any such appliance; but the inhaler described in the present number in the article on "Catarrh" should be used by you.

SEPTIMUS.—Mellin's Food only should be used for the child's nutrition. We have repeatedly stated in these pages that starchy foods are poisonous to children under the age of eight or nine months.

ABEL.—Your tendency to rheumatism arises simply from your want of woollen clothing. See advertisement in our pages of Mr. Forsyth's Hygienic Clothing, 13, Renfield-street, Glasgow. Clothe in these fabrics, and you will find your symptoms disappear.

E. P. R.—Drink Pitkeathly Water (Reid & Donald, Perth, N.B., or Best & Sons, 22, Henrietta-street, London, W.) regularly, and avoid all forms of alcohol. See also advice given to "Soho" in the present number.

ONYX.—For your teeth use Wilson's "Puriline" preparations (advertised in our pages), as your symptoms probably begin and end with neglect of your teeth. In place of tea and coffee take Scott's Oat Flour.

E. DEWAR.—Use Doig's "Septicide" as a lotion, and apply it night and morning to the affected parts.

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Horsford's Acid Phosphate.

THIS preparation supplies the phosphates required for the performance of the several functions of the body, and acts as a nutrient to the cerebral and nervous systems. Its value in the restoration of weakened energy is wonderful. Agreeable to the taste.

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